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USDOC FOR 532/OEA/M. NICKSON-DORSEY/J. HATFIELD
USDOC FOR 3131/USFCS/OIO/ANESA/KREISSL
USDOC FOR 4530/MAC/ANESA/OSA
ICE HQ FOR STRATEGIC INVESTIGATIONS
STATE FOR EB/ESP

E.O. 12958: N/A
TAGS: ETTC ETRD BEXP IN
SUBJECT: EXTRANCHECK: PRE-LICENSE CHECK: DEFENCE ELECTRONICS APPLICATION LABORATORY, DEHRA DUN, UTTARANCHAL, LICENSE NO. D363134

REF: USDOC 05928

¶1. Unauthorized disclosure of the information provided below is prohibited by Section 12(c) of the Export Administration Act.

¶2. Embassy Science Officer (SO) Donald Brown and BIS FSN Prem Narayan conducted a Pre-license Check (PLC) at the Defence Electronics Application Laboratory (DEAL), Dehra Dun, Uttaranchal, on November 28, 2006.

¶2. BIS requested a PLC on DEAL, a Defence Research Development Organization (DRDO) laboratory, Ministry of Defence (MOD), GOI. DEAL was listed as the ultimate consignee for five Model QPN-92961020PO power amplifiers (92-96 GHz.) and five Model QLN-9296015PO low noise amplifiers (92-96 GHz.) controlled under ECCN 3A001. The license applicant was Quinstar Technology, Inc. (Quinstar), Torrance, CA.

¶3. Brown and Narayan met with Asok Sen (Sen), Director and K. Sivakumar (Sivakumar), Scientist 'F', DEAL. Under Secretary (AMS) Prashant Agrawal (Agrawal), Ministry of External Affairs (MEA), GOI, facilitated the meeting. Agrawal was also present in the meeting.

¶4. DEAL has been a party to previous BIS export licenses. They were aware of certain BIS export regulations. DEAL officials were cooperative and provided a copy of the DEAL Supply Order and End-Use Certificate.

¶5. Sivakumar confirmed the stated end-use. He stated that DEAL is currently conducting research to address security concerns/terrorist threats. Both low noise and power amplifiers will be required for this research project. He stated that these W-band amplifiers would be used for the realization of direct detection radiometers. These radiometers will be used for contra-band detection experimentation. (Comment: Sivakumar went out of his way to clarify that the original documentation incorrectly called it "Center band", rather than "Contraband" detection. End Comment.) He described the application as follows: typically radiation emanates from the human body and hidden objects. Any radiation signals or temperature change will be received by the radiometers through amplifiers. The radiometer is basically a signal receiver. The low noise amplifiers will capture the low signals and transmit to the power amplifiers. The power amplifiers in turn will send these signals to the radiometer for radiation detection and further analysis. The process will enable security authorities to identify person carrying a hidden weapon or a bomb on his body or a criminal carrying narcotics.

¶6. The experimentation project is at a preliminary stage. Sivakumar stated that once they are successful DEAL would likely purchase a larger quantity of these amplifiers. He stated that the amplifiers

are so sensitive and delicate that a single mistake or mishandling may damage them and the amplifiers are irreparable. Therefore, they should have enough amplifiers to carry on research work without interruption. After the meeting, SO Brown and FSN Narayan were given a tour of the DEAL Millimeter Microwave Laboratory where these amplifiers will be used and stored. The laboratory was under renovation, but the experimental bays contained other small, bench top projects.

¶7. In 1965, DRDO established the Himalayan Research Propagation Unit. Subsequently, in 1968 it was renamed as DEAL. DEAL is one of 51 laboratories/research establishments operated by DRDO. DEAL's focus is on basic research and development in the area of communication systems, image processing, and satellite communication. DEAL employs approximately 500 personnel. DRDO was established in 1958 by the GOI MOD. Research and development activities at the various DRDO laboratories cover disciplines including aeronautics, rockets and missiles, electronics and instrumentation, combat vehicles, engineering, naval systems, armament technology including explosives research, terrain research, advanced computing, artificial intelligence, robotics, works study, systems analysis and life sciences including high-altitude agriculture, physiology, food technology and nuclear medicine.

¶8. Recommendation: All indications were that the listed commodities will be used in accordance with terms of the export license and that the Defence Electronics Application Laboratory appears to be a reliable recipient of sensitive U.S.-origin technology for this transaction. (DBROWN/PNARAYAN) Mulford